

The CHEMIST

Bulletin of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

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BOTH ARE
REGENER-
ATIVE

BOTH ARE
HIGHLY
EFFICIENT



THE CHEMIST'S CONTRIBUTION TO TELEPHONY

Excerpts from an address given by Mr. R. R. Williams, of the Bell Telephone Laboratories, before the New York Chapter on November 14th.

Chemistry is conspicuously a service science. A chemist is therefore accustomed to being associated intimately with men trained in other lines of scientific endeavor in the universities, in experimental medicine, and in many industries.

In no industry, however, is the potential activity of the chemist more inextricably related to that of technologists, notably electrical and mechanical engineers, than in telephony. For example, the design of a relay fundamentally involves electromagnetic theory, yet many features of such a piece of apparatus need close scrutiny from a chemical standpoint. The metallurgy of the core material, the corrosion of contacting points under the influence of atmospheric conditions and electric potential, and the integrity of the enamel insulation of the wire winding are all matters which the chemist may profitably consider.

The situation gives rise to a problem in the disposition and use of the chemist. If chemists are scattered here and there among groups of other technologists where their services seem to be required, they soon have a feeling of isolation and cease to bring to their problems the best that chemistry can offer. If, on the other hand, chemists are segregated in a single group this difficulty is overcome, but a new one arises in the division of responsibility between the engineer and the chemist. Experience has led the Bell Telephone Laboratories to choose the latter as the lesser evil and to overcome its inherent difficulty so far as possible by placing the chemist in an advisory position, depending upon tact and diplomacy on his part to make his influence felt.

An important general field for the chemist is that of insulating materials. In developing a submarine insulation suitable for transatlantic cable telephony, two principles have proved most important; namely, osmotic pressure as a controlling factor in water absorption by rubber and gutta percha, and the role of protein impurities as water-bearing filaments in rubber compounds. In textile insulations, the absorption of water films upon the fibres and the presence of electrolytic impurities play a deciding part. In the case of vulcanized rubber for aerial use, mechanical strength and resistance to the degrading processes of oxidation are fully as important as the electrical properties themselves.

Another large field of chemical endeavor has to do with corrosion and the prevention of corrosion. The chemist thinks of lead as highly resistant to corrosion; yet, the thousands of miles of cables of the Bell System afford many examples of the corrosion of lead cable sheath by chemical means.

Other forms of corrosion originate from the generation of volatile organic acids in wooden cable duct; from the soil, either in its original state or as modified by stray current flow; and from the underground use of iron and steel. Even in the central office corrosion is a serious matter. The tarnish on a contact depends not only on the nature of the metal of which it is composed but also upon the accumulation of oil and dust or the attack of atmospheric gases on the surfaces. Because our Manufacturing Department (which is represented by the Western Electric Company) must be prepared to stand behind its manufactured products for a reasonable number of years of service, unusual attention has been given to the mild corrosion conditions of indoor use, and every choice of material or finish must undergo a careful scrutiny before it is incorporated in a design.

Metallurgical research is classed as a branch of chemistry at the Bell Laboratories, although many closely allied activities, such as research in metallographic methods and much of the development work on ferromagnetic alloys, is grouped with physical research. One of the major metallurgical problems of the Bell System is that of cable sheath. Lead stands alone in this field, because of the plasticity which adapts it to continuous extrusion, but it must be hardened to resist mechanical injury in installation and fatigue failure in service. This has led to the development of many dispersion hardened alloys, based on the principle which was first commercially exemplified in *duralumin*. The latest development is lead calcium which promises marked improvement in quality, and offers some possibility of reduction in cost.

Another metallurgical chemical problem is in the cores of loading coils which are so important in long distance telephony. The great variety of magnetic alloys offers particular advantages in certain types of coils, but it has been difficult to produce all these magnetic alloys in a brittle form which permits the necessary pulverizing for compression. Wiping solders, high-tensile copper alloys of good conductivity, hardenable brasses and bronzes for use in spring materials, etc., also come in for metallurgical attention.

Creosote is our standby as a wood preservative. Contrary to the prevailing opinion, it is by no means infallible, and above ground is subject to evaporation losses which may in the course of years so alter the quantity or quality of creosote residues as to permit rapid rotting. A survey is being made of poles from all parts of the far-flung system which have proved conspicuously good or bad in service. This has involved the development of a variety of analytical methods and procedures for the determination of the toxicity of substances to wood destroying fungi. Almost every wood preservative which has been proposed as a substitute has been given at least a cursory examination.

The foregoing indicates some typical problems but chemical consideration and chemical activity are involved in almost every process and piece of apparatus used in the Bell System. The chief difficulty in the supervision of chemical research and advisory service lies in the almost overwhelming diversity of the problems to be attacked. In spite of every effort to the contrary it is almost certain that many important chemical possibilities are being overlooked.

In discussing *chemists* in the service, Mr. Williams stressed the importance of thorough grounding in analytical methods, and regretted the modern tendency in chemical education to slight analytical work as a necessary evil, to be avoided if possible, because it has no future, and gets one into a rut. In his opinion, the myriad ramifications of chemical industry makes analytical work a fertile field for research, and all possible development of new and original methods.

It was comforting to hear that in the Bell Telephone Laboratories the chemists happen to have the best educational background, and are considered the highest degree of their professional men. Instead of being tucked away in obscure positions to *assist* engineers or others, the chemists have full license to *advise* on all problems.

In answer to a question on what, from his viewpoint, constitutes adequate training for chemists, Mr. Williams emphasized the broader knowledge of fundamental science; less descriptive matter; pure chemistry rather than chemical engineering; and again, the particular need for analytical work—and respect for it on the part of both teachers and prospective chemists.

Dr. Crossley expressed his pleasure at the opportunity which the Bell Laboratories give to chemists to associate with other technical men and thus become more than a chemist.

Mr. Quigley told something of the great opportunities which the Bell Laboratories give to men without degrees, to study and improve their status. He characterized the organization as having all the advantages and none of the disadvantages of a university, where a chemist's viewpoint is necessarily kept very broad, and where he has every opportunity to develop his tact and diplomacy on the many occasions in which he serves in his advisory capacity to the engineers, mechanics, and others. "Ninety per cent of success or failure depends on one's ability to co-ordinate with others."

DR. WYNNE TO ADDRESS JOINT MEETING

The Joint Meeting of the Chemical Societies, on the evening of December 12th, will feature as chief speaker, Dr. Shirley Wynne, Commissioner of Health for the City of New York. The meeting is under the auspices of *The American Institute of Chemists*.

Mr. Frederick J. Kenney, Chief Chemist of the Department of Purchase, City of New York, will preside in his capacity as chairman of the local section of the Institute. The co-operating societies, all of whose members will receive notice of the meeting, are: *The Society of Chemical Industry, The American Chemical Society, The Société de Chimie Industrielle, and The American Electrochemical Society.*

The meeting will be held in the re-opened dining room of the Chemists' Club. The Committee in charge of the work of extensive alteration which has been transforming the Chemists' Club during the past seven months, has announced that the dining room will be ready in good season, to permit of the Joint Meeting being held in the Club.

Doctor Wynne's subject will be *The Chemist and His Relations to the Problems of Public Health.*

WHEN IS A CHEMIST?

The Answer Seems to Depend Somewhat upon Which Side of the Ocean He Is On

In Great Britain, where the pharmacist has long been called "chemist" and the pharmacy known as a "chemist's shop," there is a movement to get away from the old designations and to adopt the American nomenclature. On the other hand, some American pharmacists call themselves chemists. This latter practice is not approved by the *Journal of Industrial and Engineering Chemistry*, published by the American Chemical Society, but quite the contrary. Says the *Journal*, with some show of choler:

Success is always capitalized, sometimes by those who have contributed to it, but often by those who, though having no part in it, would subvert it to their own uses. The accomplishments of chemistry have made things chemical attractive to many who prey upon the gullible, and a flagrant misuse of the word "chemist" has just come to our notice.

If those who sell the multitude of things now found in the modern drug stores are to be allowed to call themselves "retail chemists" then certainly those who sell drugs only should be called "retail doctors," and where dentifrices and tooth brushes are handed over the counter we shall expect to find "retail dentists."

The whole thing is utterly absurd and vigorous steps must be taken to have all and sundry understand that the word "chemist" rightfully belongs to an ancient and honorable calling.

—Unidentified British Trade Paper

BOTH SIDES OF THE EMPLOYMENT QUESTION

Excerpts from an address given by Mr. J. D. Stevens, of the Business Service Company, before the Pennsylvania Chapter on November 4th.

I am surprised at the interest in human relations shown by you chemists here tonight; for one is accustomed to think of chemists in connection with material things, rather than in their own personality.

The men who come to an employment agency tell confidential things which give the interviewer not only a very intimate knowledge of themselves, but also much detailed information about the employers who "hire or fire" them. The placement of men often lacks definite facts as a basis of procedure, and is thus directly opposite to a chemical reaction, because it is difficult to predict what the reaction of an individual may be to new surroundings. When personalities meet, they sometimes clash and sometimes agree, and that forms the real problem for the employment man in attempting to place a man in a certain position.

In looking over a prospective employee, let us analyze what influences us to accept or reject him. The first thing that strikes one is *appearance*. Appearance means more than being well dressed; it includes neatness, poise, address, confidence, and aggressiveness—or the lack of any of those qualities. The employment expert sizes these things up rapidly; he tries to encourage the retiring man and tone down the one who is too breezy. Appearance is far more important than we usually think because the interviewer has so little time that what his eyes tell him will count heavily in his final decision—he may not have time to dig out the whole story. The next thing is the *reaction to conversation*; qualities that impress favorably are the ability to follow a given line of thought, sticking to the essentials and a sense of proportion. Integrity, honesty, and reliability, straightforwardness or evasion, statements of ability, past performance, bluffing, and so forth show themselves in what the man does. The interviewer should next make an estimate of the applicant's *common sense*; in other words, his ability to think for himself. From all of the preceding, he can then evaluate the extent to which the man has benefited from his past experience and training. It is worthy of note that many firms place considerable stress on family background as an essential.

What does the employer do? As a rule, he seldom knows what he wants when he decides to hire a man. For example, I had a call for a woodworking foreman. The man I sent had the right specifications but could not handle the job, because that employer really wanted an engineer to lay out a plant and install woodworking machinery. I sent such an engineer and he was hired.

Every employer has his own method of sizing up his man and of course

some are efficient, others not. A common failing among employers is the inability to make a decision after interviewing a number of men; just why, it is difficult to say. Some employers expect a man to start productive work at once, but the best work is usually done by men to whom the employer first gives some training.

A frequent complaint which the employment counselor hears is poor treatment of employees. It is just as important to hold men as it is to hire them, and holding men requires that they be treated like human beings. There are certain chemical companies whom we all know, who evidently do not believe that. To hold a man the employer must consider his viewpoint, give credit where credit is due, and make the man feel that he is a valuable member of the company.

When hiring a man, remember these points: get on a friendly basis as soon as possible and win his confidence. When the average man meets a stranger he has on him a protective veneer of bluff which must be penetrated before the real facts are obtainable. Never make promises about the future in a job. The best work is always done when an employee starts work with a frank statement of the facts.

When you are looking for a job, select it—instead of taking the first thing that comes along. Take work that appeals to you or you will never be satisfied. Look over the prospective employer. Do you think that you can get along with him? The future in any job is a combination of luck and your own ability, plus how you fit the job and the boss.

To you as chemists, I shall present the following questions for discussion later and give my own opinions now.

1. *Should a man change his job often?* I am not comparing the chemist with the commercial man whose value is frequently measured by his experience with one concern. I believe that a chemist should change his job often when young; every five years or so. It is broadening and educational, and helps him to renew his enthusiasm and aggressiveness. In Philadelphia a number of firms are dropping behind because their executives are recruited entirely from within the company and have never had any outside experience. It is probably common in other cities too. Whether a man should change his job after thirty-five depends upon the man, and on the job.

2. *Should he choose a large company or a small company?* The large company has a tendency to be too machine-like and restricted. A man lacks the opportunity to get the general experience that a small company provides. In a small company a man has a better chance to show what he can do and a better opportunity to get credit for good work. The large company used to hold out the attraction of stability and permanence but today it drops its workers in poor times just as quickly as the small company.

3. *What shall we do with the man over thirty-five?* Concerns today want men between twenty-five and thirty-five. This is odd, and not altogether understandable, because good men learn readily at forty while inferior men are just as bad at thirty as at forty. For the man over forty-five employment is a real problem. Shall the solution be old age pension by insurance or annuity? Most men find it hard to save and for them it must be made compulsory. I propose that when salary is to be increased because of seniority that the increase be put aside as compulsory savings.

4. *What about the present depression and unemployment?* There is plenty of room for discussion and the only solution I can see is to keep all the employees and to stagger the work instead of cutting the force.

5. *What is the future of the study of human nature?* There is little definitely known now and much remains to be done. There is a need for a study of adaptability and tendencies from childhood and a better placement of the individual as a result of such studies. The great waste of maladjustment and employment now had its beginning in misplacement and employment in jobs for which men were unfit.

In the discussion which followed, the following points were brought out. Changing jobs depends a lot on what a man wants and whether he knows what he wants. The weakness of most employers is that they look for specific experience instead of general experience, the value of which is not generally appreciated. The importance of impressions in aiding sales was stressed. Also the necessity of building up for our younger chemists and advancement from level to level. Mr. Stevens thought that a year of sales experience would be a valuable asset to every chemist.

—F. D. JONES

This issue contains the completely revised Constitution and By-Laws, and the Code of Ethics of the Institute.

Keep your own copy for future reference.

Additional copies and application blanks for prospective members can be obtained from the Secretary. See form, page 60.

IN POSSE ET ESSE¹

BY T. LINSEY CROSSLEY, F.C.I.C

*I long to be a chemist
And with the chemists stand:
A wrinkle in my forehead,
A test-tube in my hand.
I hope to be a chemist—
To taste a chemist's joys
And fill Wolff flasks with hydrogen
To burst with lots of noise.
How grand to be a chemist
And make some H₂S
Or fill the air with chlorine gas
To give my friends distress.*

*Of course when I'm a chemist
I'll not behave like that,
But weigh a gram of something
To hydrolyze a fat.
I'll boil a little phlobaphene
Or take some standard sand
To mix some nice cement briquettes
And blister up my hand.
I'll have a kjeldahl flask collapse
And carbonize my shoes,
Or spill some sodium silicate
And slip down on its ooze.
But then as well, I'd do research,
Whatever that may be,
Perchance I'd find a vitamin,
Entirely new, in glee.*

*Oh joy, that as a chemist
I'll earn my daily bread,
But that is about all I'll earn,
And when they find me dead
They'll print a half-tone cut of me
Of thirty years before,
And say, "A well-known chemist dies."
In six point type, no more.*

The picture Mr. Crossley has sketched refers rather more to a period that has passed or is passing. Discoverers of new vitamins or those who accomplish chemical and scientific work worthy of the notice are not without some rewards including contributions from treasuries.—*The Canadian Chemist, August, 1930.*

¹ Modern, specialized training being what it is, most American chemists shudder at Latin. As a free—utterly reckless—translation of the title, we submit *Possibility and Actuality*.—ED.

THE PRESIDENT'S PAGE

Junior Members

At the Annual Meeting of May 10, 1930, the following constitutional amendment was adopted:

Junior members shall consist of those who have attained the senior year in chemistry or chemical engineering, in an educational institution of recognized standing.

The purpose of this action was to get the young chemist, or chemist about to graduate, interested in his profession as well as in his technical equipment. Then as he grows in experience and qualifications it is hoped that the young man will become an Associate Member. Finally, when he has attained full maturity, he should reach the grade of Fellow.

Which of our colleges will be the first to form a chapter of Juniors? Here is a golden opportunity to make our young colleagues feel that they are members of a profession, that they have completed the first stage of their apprenticeship, that they are definitely headed toward a full-fledged fraternity with men of technical ideals of service and of ethics.

Which college will be the first?

The Chemist in the Federal Service

At the October meeting of the national council, the classification of the chemists in the service of the Federal Government proposed by the Washington Chapter was unanimously endorsed. This action was taken after the original proposal had been thoroughly threshed out by a committee of the council and then by the whole council itself. The unanimous vote of the Council, therefore, represents the result of investigation and deliberation.

The men who are affected by the proposed classification are civil servants whose ideals of service are of the highest order. We want them to know and to feel that the American Institute of Chemists is with them and for them in their worthy cause. And the Institute feels that in advocating the just recognition of the value of the work of these men, it is also helping the public and the country. It surely must be better for the service to have contented well-paid men in its employ.

F. E. B.

Application blanks for student membership may be obtained from the Secretary. See form, page 60.

BUSINESS ORGANIZATION AND ADMINISTRATION

Excerpts from a talk given by Mr. H. B. Miller, of Charles W. Young and Company, before the Philadelphia Chapter, October 14, 1930.

The year 1930 has been a poor business year in general, but conditions are beginning to show improvement. In poor years stress is laid on economy particularly as it applies to money.

Our American civilization has so thoroughly become accustomed to money as a medium of exchange that every thing today is evaluated in terms of money. Prosperity means a surplus of money—depression, a lack of it, in most businesses as well as in most families. Practically every business is an enterprise undertaken for profit and it goes through cycles of prosperity and depression.

In various lines of business we find enterprises depending successively on one another. For instance, we have the farmer dependent upon the general consumer; the equipment, fertilizer and milling companies dependent upon the farmers; the transportation companies dependent upon the products of all four; the baker, and the grocer dependent upon the preceding; and so on, indefinitely. Transportation and the railroads form the backbone of industry. Banking and finance form the backbone of credit. All are necessary and interdependent in our economic fabric. Humanitarian work and welfare are subsidiary to profit making, but they are means to an end because business cycles depend on the welfare of the community.

Prices are interdependent with the volume of business and readjust themselves as the latter fluctuates and with them the margin of profit. Margins vary inversely with volume, the retailer having the largest margin though smallest in volume. All are based on cost, and cost is the sum of the labor involved. The price of labor is determined to a large extent by the demand for the product and the skill required in making it.

As a result of mergers we have seen considerable readjustment in the past ten years, with the constant elimination of overhead and labor, causing maladjustments. We hope these will adjust themselves in time.

Realization of the value of chemistry in business is not general. In the opinion of the speaker, the chief drawback of the chemist is his reticence, expressed as shyness and inability to sell himself.

In good times or bad, the successful firms are those who study business conditions and business methods and—which is more important—apply what they find. In hard times those who do not follow these rules of common sense fail, and only the stronger are left—the survival of the fittest.

—F. D. JONES

CONSTITUTION *and* BY-LAWS *of*

The AMERICAN INSTITUTE *of* CHEMISTS

CONSTITUTION

ARTICLE I

Names and Objects

Section 1. The name of this organization shall be **The American Institute of Chemists.**

Sec. 2. Its objects shall be to advance the profession of chemistry in America.

To this end it will:

- (1) Provide and enforce a code of principles of professional conduct which merits public esteem and justifies confidence in the integrity of the chemist;
- (2) Establish and maintain a standard of proficiency of such excellence as to insure competent and efficient service;
- (3) Secure an adequate basic training for the profession, and admit to fellowship in the Institute only those of proved education, experience, competency, and character;
- (4) Strive to enhance the prestige and distinction of the profession so as to extend its influence and usefulness;
- (5) Establish and maintain a register of its membership in which there will be a complete record of the training, experience, and fitness for service of each individual member;
- (6) Seek to improve the economic status of the profession by co-operating with employers to secure a satisfactory appreciation and evaluation of the services of the chemist;
- (7) Provide a means for the appropriate recognition of distinguished service rendered by individual members of the profession;
- (8) Co-operate with all the agencies serving chemistry to make the profession of chemistry a powerful factor in the advancement of intellectual and material progress in America to the end that this nation shall assume its rightful place as a leader among the nations of the world in scientific thought and accomplishment;

- (9) Lend support to the work of the chemical societies in the education of the public to a better appreciation of the contribution of the chemist to world progress; and
- (10) Render such other services to the profession as developments shall warrant and The American Institute of Chemists shall approve.

ARTICLE II

Membership

Section 1. The membership of the Institute shall consist of (1) **Honorary Members**; (2) **Life Members**; (3) **Fellows**; (4) **Associates**; and (5) **Juniors**.

Sec. 2. **Fellows** shall consist of American citizens who have had a minimum of six years of collegiate and post graduate training in chemistry or chemical engineering, at least two years of which training must be of an advanced nature, and who have had a minimum of five years of experience and responsibility in the practice of the profession, and who shall have been approved by the Council.

For those who received their academic training prior to 1926, the educational requirements shall be four years.

Life members shall have the qualifications of Fellows.

Sec. 3. **Associates** shall comprise those who have the educational qualifications required of Fellows.

Sec. 4. **Juniors** shall comprise those who have attained the Senior year in chemistry or chemical engineering in an educational institution of recognized standing.

Sec. 5. Applications for membership in the various grades shall be made in writing on the form approved by the Council. These applications shall be submitted to the Council. Approval by the Council, after due investigation shall have been made, shall constitute election of the applicant and his name shall be placed upon the roll by the secretary.

Sec. 6. The Council is empowered to consider and accept qualifications other than those above set forth and provide such other means of ascertaining the ability and qualifications of prospective members as they may deem desirable, or as the Institute shall direct. Other classes of membership may be established on recommendation of the Council.

Sec. 7. Voting power in the Institute shall be vested exclusively in the Life Members and Fellows. Associates and Juniors may attend all meetings and may have the privilege of the floor at the discretion of the chairman of the meeting then in session. Associates and Juniors shall also receive all publications and notices of the Institute.

Sec. 8. The name of any member shall be dropped from the roll automatically for failure to pay his dues within a year from date due, or for cause by a two-thirds vote of the Council, after due notification and an opportunity to be heard has been given him.

ARTICLE III

Officers and Manner of Election

Section 1. The officers of the Institute shall be:

- a A President, a Vice-President, a Treasurer, and a Secretary.
- b A Council composed of the President, Vice-President, Treasurer, and Secretary of the Institute; nine Councilors-at-Large, and a representative from each chapter.
- c A Board of Directors, composed of the President, Vice-President, Treasurer, and Secretary of the Institute, *ex-officio*, and the nine Councilors-at-Large, elected in the manner prescribed in Section 2 of this Article.

The foregoing officers and three Directors or Councilors-at-Large shall be elected at the annual meeting and shall hold office until their successors have been elected and installed. The chapter representative shall be elected annually by each chapter.

Sec. 2. The term of office of the officers shall be two years; that of the nine Directors or Councilors-at-Large shall be three years. Vacancies among the Councilors-at-Large or among the officers shall be filled by the Council, the Councilor-at-Large, or officer so appointed to serve until the next annual meeting.

Sec. 3. The Council shall elect an Executive Secretary who shall also act as an executive officer under the direction of the Council, and who may be the Secretary.

Sec. 4. The Council shall also be empowered to elect or appoint such other agents or employees as may be necessary for the proper conduct of the affairs of the Institute.

Sec. 5. Ex-Presidents of the Institute shall be *ex-officio* members of the Council.

ARTICLE IV

Directors

Section 1. The **Directors** shall be the legal representatives of the Institute, shall have charge of the property and financial affairs of the Institute, and shall perform such duties as are prescribed by law governing directors of corporations. Their meetings shall be held at the call of the President of the Institute, or any three Directors.

ARTICLE V

Committees

Section 1. The following regular standing committees shall be elected by the Council:

Professional Education

Ethics

Nominations

Qualifications

Other committees may be established by the Council or may be authorized by the Institute.

Sec. 2. There shall be a **Jury of Medal Award** consisting of the President, the three immediately preceding past Presidents, and the Secretary.

Sec. 3. There shall be a **Committee on Nominations** consisting of the President and Secretary of the Institute and the Chairmen of all of the Local Chapters.

Sec. 4. The President shall be *ex-officio* a member of all committees.

ARTICLE VI

Chapters

Section 1. Local chapters may be established by the Council on written request of twenty Fellows residing in the territory in which the local chapter is desired. Each chapter shall appoint its own officers and provide such rules for its government as are not inconsistent with the constitution and by-laws of the Institute. The local chapters shall receive for local use such portion of their annual dues as may be authorized by the Council or directed by the Institute. Any local chapter may be dissolved by the Council when such action shall be deemed to be for the benefit of the Institute.

ARTICLE VII

Amendments

Section 1. The Secretary shall submit to the Fellowship any proposition to amend the constitution of the Institute which shall be proposed by ten or more Fellows of the Institute in good standing, or by the Council.

Sec. 2. All such propositions to amend must be given in writing to the Secretary of the Institute at least sixty days before the annual meeting at which the proposition is to be submitted for action.

Sec. 3. A copy of every proposition to amend shall be embodied in the call for the Annual Meeting, at which the proposition to amend is to be submitted for action, and a copy sent to every Fellow of the Institute at least thirty days before the Annual Meeting at which the proposition to amend is to be submitted for action.

Sec. 4. Propositions to amend, duly made in the above manner, shall be laid before the Annual Meeting for discussion and vote. If the proposition to amend is approved by a two-thirds vote of the voting membership present at the Annual Meeting, such proposition to amend shall be submitted to a mail vote of the entire voting membership of the Institute for ratification.

Sec. 5. The ballots for the ratification of propositions to amend approved by the Annual Meeting shall be valid and counted only if received by the Secretary within thirty days from the date of mailing ballot forms from the office of the Institute.

ARTICLE VIII

By-Laws

Section 1. The Council is empowered to make such By-Laws as may be necessary for the proper government of the affairs of the Institute, provided they do not conflict with the constitution.

BY-LAWS

ARTICLE I

Duties of Officers

It shall be the duty of the President, or in his absence, of the Vice-President or other members of the Council designated by the Council, to preside at all meetings of the Council and Institute. He shall call meetings of the Institute, of the Directors, or of the Council, when he deems it necessary, or on written request of at least three Directors for a meeting of the Directors, or of at least five members of the Council for a meeting of the Council, or of twenty-five Fellows of the Institute for a meeting of the Institute. The duties of the Vice-President and Treasurer shall be those usually appertaining to such offices. The Secretary, in addition to performing the usual duties of that office, shall discharge such other duties as may be imposed upon him by the Council. The duties of the directors are those set forth in **Article IV** of the constitution.

ARTICLE II

Audit

The accounts of the Institute shall be audited by two auditors appointed by the President, who shall report at each Annual Meeting. The books and accounts shall be submitted by the Treasurer for audit at least three days preceding the date of the Annual Meeting.

ARTICLE III

Council and Committees

Section 1. It shall be the duty of the Council to act as an advisory board in every matter pertaining to the policy of the Institute, to keep a record of its proceedings and report to the Institute at each Annual Meeting. The Council shall exercise all powers requisite for the purposes of the Institute. No payments shall be made by the Treasurer without authority of the Council.

Sec. 2. The Council shall adopt an annual budget showing the money appropriated for the purposes of the Institute and estimating the revenue for the ensuing year. The budget shall be submitted to the Directors for approval, and upon approval by them shall be considered the budget for the ensuing year. No debts shall be contracted or money expended without the prior approval of the directors.

Sec. 3. It shall be the duty of the Committee on Nominations to notify the Secretary of the Institute, at least ninety days before each Annual Meeting, of such Fellows as in its opinion are qualified for each office and councilorship to be filled at the next Annual Meeting. The Secretary of the Institute shall accompany each nomination blank with a list of such proposed names with notice that they have been suggested by the Committee on Nominations.

ARTICLE IV

Conditions for the Award of the American Institute of Chemists' Medal

Section 1. A gold medal may be presented by the American Institute of Chemists at its regular Annual Meeting under the conditions hereinafter set out. This medal shall be known as **The American Institute of Chemists' Medal**. The date of the founding of the medal shall be 1925 and the founding shall be for the purpose of stimulating activities of service to the science of chemistry or the profession of chemist.

Sec. 2. The Jury of Medal Award of **The American Institute of Chemists' Medal** shall have five members, each of whom, at the time of the award, shall be a member of The American Institute of Chemists. The Jury shall consist of the active President of The American Institute of Chemists, the three immediately preceding eligible Past-Presidents of The American Institute of Chemists, and the Secretary of The American Institute of Chemists. Each member shall have but one vote. The senior Past-President member of the Jury shall be the Chairman thereof, and the Secretary of The American Institute of Chemists shall be the Secretary of the Jury. Three members shall constitute a quorum. The vote shall be cast by ballot. No votes shall be cast by proxy, but votes may be taken by mail.

Sec. 3. The award shall be made by a majority vote of the Jury of Medal Award. The award shall be made for noteworthy and outstanding service to the science of chemistry or the profession of chemist in America.

Sec. 4. Not more than one medal shall be awarded at any regular Annual Meeting of The American Institute of Chemists.

Sec. 5. The Jury of Medal Award shall meet upon call of the Chairman and shall conclude its consideration during the month of January of each year, and the individual to whom the award is to be made shall be immediately notified thereof in writing by the Secretary of the Jury of Medal Award.

Sec. 6. The Jury of Medal Award of **The American Institute of Chemists' Medal** shall have power to decide any question or questions not specifically covered by these rules.

ARTICLE V

Meetings of the Institute

Section 1. There shall be a regular Annual Meeting of the Institute at such time and place as shall be determined by the Council or by vote of the Institute. The fiscal year of the Institute shall end with the 30th day of April of each year.

Sec. 2. Notice of each Annual Meeting of the Institute shall be sent to each member at his last known address at least thirty days before each meeting.

Sec. 3. Other meetings of the Institute may be held as provided by the Council, to promote the purposes of the Institute.

Sec. 4. Chapter meetings may be held as may be provided by their own regulations.

Sec. 5. Meetings may be held by Junior members in each institution of technical education.

ARTICLE VI

Meetings of the Council

Section 1. Regular meetings of the Council shall be held periodically as the members may determine.

Sec. 2. Notice of meeting of the Council shall be sent to each member at his last known address. Such notice as far as practicable shall contain a statement of the business to be transacted.

Sec. 3. Special meetings of the Council may be called as provided in **Article I, Section 1**, of these By-Laws.

Sec. 4. In lieu of a special meeting of the Council, the President may submit any question to the Council for vote by correspondence, and any action approved in writing by not less than two-thirds of the whole membership shall be declared by the President an act of the Council, and shall be recorded in the minutes of the Council.

Sec. 5. That meetings of the Board of Directors shall be held as provided in **Article IV** of the Constitution. For all meetings of the Board of Directors notice shall be given by the Secretary to the members of said board at least one week prior to the date of said meeting, and the notice of said meeting or meetings shall contain a statement of the business to be transacted.

ARTICLE VII

Quorum

Section 1. Twenty-five Fellows of the Institute shall constitute a quorum for the transaction of any business duly presented at any meeting of the Institute.

Sec. 2. Five members of the Council shall constitute a quorum of the Council.

Sec. 3. Seven Directors shall constitute a quorum for all meetings of the Board of Directors.

ARTICLE VIII

Nomination and Election of Officers and Councilors

Section 1. Nomination blanks shall be sent by the Secretary to all Fellows at least sixty days preceding each Annual Meeting. These blanks shall indicate the positions to be filled, and must be returned within fourteen days thereafter. The returned blanks shall be canvassed by two tellers appointed for that purpose by the President, who shall certify the list of nominees to the Secretary.

Sec. 2. For the election of officers, the Secretary shall prepare and send to each Fellow, at least thirty days before the Annual Meeting, a ballot containing a list of three nominees for each position to be filled, arranged in the order of the number of nominating votes. For the election of Directors or Councilors-at-Large the ballot shall contain the names of nominees, in twice the number to be elected, for each group to be filled, arranged in order of the number of nominating votes. Ballots must be returned within twenty days thereafter.

The ballot shall be counted by two tellers appointed for that purpose by the President, and the results shall be certified to the Council. The person receiving the highest number of votes for each position shall be declared elected. In case of a tie vote the decision shall be made by ballot at the Annual Meeting.

ARTICLE IX

Section 1. The following shall be annual dues: **Fellows**, \$10.00; **Associates**, \$3.00; **Juniors**, \$1.00.

For Fellows and Associates elected in the second half of the fiscal year, the dues payable for the remainder of the fiscal year shall be half of the amounts set out above.

The fee for **Life Members** shall be \$100.00, said fee to be set aside and distributed to the common fund of the Institute according to the decision of the Council.

Sec. 2. All dues must be paid on or before May first of each year, or at the date of election to membership.

Sec. 3. No member shall be entitled to vote at any meeting when his dues shall be sixty days in arrears.

Sec. 4. Life Members and Fellows, when elected, shall be entitled to a certificate setting forth that he or she is a Life Member or Fellow of the Institute, but no certificate shall be issued in advance of the receipt of dues for the current year. Certificates of membership must be returned to the Council upon termination of membership for any cause except death.

ARTICLE X

Use of Title of Fellow and Associate

Section 1. **Life Members** and **Fellows** of the Institute shall be entitled to describe themselves as *Fellows of the American Institute of Chemists* (F. A. I. C.) and **Associates** as *Associates of the American Institute of Chemists* (A. A. I. C.).

ARTICLE XI

Forfeiture of Membership and Reinstatement

Section 1. A person whose membership shall have been forfeited for non-payment of dues or other sum due by him to the Institute may be reinstated on such terms and conditions as the Council may impose.

Sec. 2. A **Life Member** or **Fellow** or an **Associate** renders himself or herself liable to expulsion by the Council sitting as a trial board if he or she transgresses any of the rules and regulations of the Institute.

ARTICLE XII

Order of Business

Section 1. At all regular meetings of the Council and of the Institute the order of business shall be as follows:

- a* Approval of minutes of previous meeting.
- b* Report of Secretary.
- c* Report of Treasurer.
- d* Report of committees.
- e* Unfinished business.
- f* Special business.
- g* New business.

Sec. 2. The rules of parliamentary procedure contained in Robert's *Rules of Order* shall govern all meetings of the Council and Institute.

ARTICLE XIII

The CHEMIST

The official publication of the Institute shall be called *The CHEMIST*. The Editor shall be appointed by the Council.

The CHEMIST shall be issued each month during the season; *i. e.*, from October to June, inclusive.

The subscription fee to *The CHEMIST* shall be allocated from the annual dues, at the rate of two dollars (\$2.00) a year from Fellows and Associates.

The CHEMIST HAS PLENTY OF ROOM FOR ADVERTISEMENTS. IF YOU KNOW OF PROSPECTS WHOSE ADVERTISEMENTS YOU WOULD LIKE TO SEE IN THESE PAGES, PLEASE EITHER SOLICIT THEM DIRECTLY FOR US AND REFER THEM TO US FOR RATES, OR SEND US THE NAMES, AND WE SHALL WRITE TO THEM.

CODE of ETHICS

The AMERICAN INSTITUTE of CHEMISTS

The profession of chemistry has become an increasingly important factor in the progress of civilization, and in the welfare of the community. Chemists are entitled to the position and authority which will enable them to discharge their responsibilities properly and to render effective service to humanity. In order that the honor and dignity of the profession be advanced and maintained, **The American Institute of Chemists** has prepared the following code to define the rules of professional conduct and ethics, binding on its members.

1. Every individual, on entering the profession of chemistry and thereby becoming entitled to full professional fellowship, incurs an obligation to advance the science and art of chemistry, to guard and uphold its high standard of honor, and to conform to the principles of professional conduct.

2. It is the duty of a chemist to bear his part in sustaining the laws, institutions, and burdens of his community.

3. The chemist shall not knowingly engage in illegal work or co-operate with those who are so engaged.

4. A chemist shall carry on his professional work and act in a strict spirit of fairness to employers, contractors, and clients, and in a spirit of personal helpfulness and fraternity toward other members of the chemical profession.

5. He shall refrain from associating with or allowing the use of his name by any enterprise of questionable character.

6. He shall advertise only in a dignified manner, being careful to avoid misleading statements.

7. He shall co-operate in upbuilding the profession by exchanging general information and experience with his fellow chemists, and by contributing to the work of technical societies and the technical press, where such information does not conflict with the interests of his client or employer. It is very desirable that the first publication regarding inventions or other scientific advances be made through the technical societies and technical publications and not through the public press. Care shall be taken that credit for technical work be attributed as far as possible to the real authors of the work.

8. If in his opinion, work requested of him by clients or employers seems to present improbability of successful results, he shall so advise before undertaking the work.

9. He shall be conservative in all estimates, reports, testimony, etc.,

and especially so if these are in connection with the promotion of a business enterprise.

10. He shall not accept compensation, financial, or otherwise, from more than one interested party without the consent of all parties concerned, and shall not accept commissions from outside parties on sales to his client or employer without their knowledge. He is, however, in no way debarred from accepting employment for more than one employer where there is no conflict of interests.

11. He shall not use any unfair, improper, or questionable methods of securing professional work or advancement, and shall decline to pay or accept commissions for securing such work.

12. He may use all honorable means in competition to secure professional employment but shall not, by unfair means, injure directly or indirectly, the professional reputation, prospects or business of a fellow chemist; and shall not attempt to supplant a fellow chemist after definite steps have been taken toward the latter's employment.

13. He shall not knowingly accept employment by a client or employer while the claim for compensation or damage, or both, of a fellow chemist previously employed by the same client or employer and whose employment has been terminated, remains unsatisfied, or until such claim has been referred to arbitration, or issue has been joined at law, or unless the chemist previously employed has neglected to press his claim legally.

14. He shall be diligent in exposing and opposing such errors and frauds as his special knowledge enables him to recognize.

15. Any infractions of these principles of professional conduct, coming to his attention, shall be reported to the Ethics Committee of The American Institute of Chemists.

16. He shall not attempt to compete with a fellow chemist on the basis of professional charges, by reducing his usual charges in order to underbid, after being informed of the charges named by the competitor.

17. He shall not accept any engagement to review the professional work (except journal articles and similar scientific publications, and in litigation) of a fellow chemist without the knowledge of such chemist, or unless the connection of such chemist with the work has been terminated.

18. When undertaking work for a client or employer, he should enter into an agreement regarding the ownership of any and all data, plans, improvements, patents, designs, or other records which he may develop or discover while in the employ of such a client or employer. In the absence of a written understanding the following principles are held to apply:

- a If a chemist uses information obtainable only from his client or employer which is not common knowledge or public property,

any results in the form of designs, plans, inventions, processes, etc., shall be regarded as the property of the employer.

- b* If a chemist uses his own knowledge or information or data which by prior publication or otherwise are public property, then the results in the form of designs, plans, inventions, processes, etc., remain the property of the chemist, and the client or employer is entitled to their use only in the case for which the chemist was retained.
 - c* All work and results accomplished by the chemist outside of the field for which he was employed or retained are the property of the chemist.
 - d* Special data or information obtained by a chemist from his client or employer or which he creates as a result of such information, are to be considered confidential, and while it is ethical to use such data or information in his practice as forming part of his professional experience, its publication without permission is improper.
19. He shall as far as possible in consulting work fix fees at a point high enough to warrant complete and adequate service. Unreasonably low charges for professional work tend toward inferior and unreliable work. In fixing fees it is proper for him to consider:
- a* The time and labor involved, the novelty and difficulty of the matter and the experience and skill necessary.
 - b* Whether the employment precludes other employment in similar lines or will involve the loss of other business while engaging in the particular work.
 - c* Customary charges of chemists for similar services.
 - d* The magnitude of the matter involved, and the benefits resulting to the client from the services.
 - e* The character of the employment, whether casual or for an established and constant client.
20. While it is desirable that chemists engaged in teaching and research should be permitted to use their special knowledge and skill in direct service to individual clients, it is prejudicial to the welfare of the profession for such services to be rendered at rates which ignore ordinary costs of equipment, supplies, and overhead expenses.
21. Having established a fair fee and billed same to a client, he should oppose any effort of a client to have such fee reduced without real and sufficient cause. Wherever compatible with self-respect and the right to receive a reasonable recompense for services rendered, controversies with clients regarding compensation are to be avoided. There should, however, be no hesitation to apply to the courts for redress to prevent injustice, imposition, or fraud.

EMPLOYMENT NOTES

The Bureau of Employment of the Chemists' Club is co-operating with the American Institute of Chemists, so that some of the better positions listed with the Bureau may be brought to the attention of Institute members. The Bureau welcomes correspondence with any one interested in the following openings:

- 1313 Opening in France for a man who has had several years' experience in the manufacture of oil-cloth. Must have both a practical and theoretical knowledge.
- 1357 Chemist or Chemical Engineer experienced in the formulation and manufacturing of both oil and lacquer undercoatings, and especially experienced with the new synthetic gum undercoatings and lacquers.
- 1452 Opening for a baker chemist who would be able to understand the chemistry of ingredients and be able to co-operate with the Sales Department in promoting sales by doing actual baking.
- 1463 Opening for a man with three to five years' varnish research experience.
- 4300 High-grade salesman, good background in organic chemistry and experienced in sale of chemicals.

The Bureau also has various positions for recent graduates, either bachelor's, master's, or doctor's, within the last two years.

It should of course be understood that Institute members would receive introductions to these employers only under the conditions of the Bureau's regular contract.

 United States Civil Service Examinations

<i>Position</i>	<i>Entrance Salary</i>	<i>File Applications by</i>
Associate Pharmacologist	\$3,200 to 3,800	December 10, 1930
Associate Biochemist (Animal Body Fluids)	\$3,200 to 3,800	December 10, 1930
Associate Physiologist (Agriculture)	\$3,200 to 3,800	December 10, 1930
Associate Technologist (Honey)	\$3,200 to 3,800	December 10, 1930
Junior Chemist	\$2,000	January 27, 1931

 Positions Wanted

- 11X30 Graduate Chemist, 3 years' teaching experience, wishes position in research work or analytical chemistry.
- 11Y30 Graduate Chemist, 4 years' experience in Analytical Chemistry, Metallurgy, and Metallography, wishes position.
- 11Z30 Graduate Chemist, experienced in pharmaceutical and food chemistry, wishes position.

ALL COMMUNICATIONS INTENDED FOR PUBLICATION
SHOULD BE SENT DIRECTLY TO THE EDITOR, FLORENCE E.
WALL, 345 EAST 68TH STREET, NEW YORK CITY.

THE NATIONAL COUNCIL

The seventy-fourth meeting of the Council of The American Institute of Chemists was held at the Secretary's office, Room 2110, 233 Broadway, New York, N. Y., on Friday, October 31, 1930.

President Dr. Frederick E. Breithut presided. The following councilors and officers were present: E. F. Cayo, W. M. Grosvenor, J. F. X. Harold, K. M. Herstein, H. G. Knight, D. F. J. Lynch, H. R. Moody, H. S. Neiman, A. Rogers, F. W. Zerban, and F. W. Zons.

The minutes of the previous meeting were read and approved.

The Treasurer reported a cash balance on hand of \$3,978.36, which includes the \$500.00 received from the Municipal Chemists.

Dr. Grosvenor read the auditors' report for the previous year's work. It was moved and seconded that this report be accepted and filed.

Dr. Zerban reported for the Committee on Classification of Government Chemists and read a letter from Dr. Couch of the Washington Chapter, in which the objections of the Committee to the proposed classifications were reputed. This report was discussed by Dr. Knight, Dr. Lynch, Dr. Breithut, Dr. Harold, and Dr. Grosvenor.

It was moved and seconded that the proposed classification of government chemists be approved by the Institute, subject to such modification as the Washington Chapter may deem necessary. The motion was unanimously carried.

Dr. Breithut reported on the matter of the Municipal Chemists and the Board of Estimate and promised to keep in touch with it.

The Secretary read a letter from Mr. Cayo relative to a suggestion for a "Clearing Committee" to advise members about chemical or legal projects. It was suggested that the Secretary write a letter to the Secretaries of the New York and Washington Chapters calling their attention to this suggested committee, and advising them that it is a matter to be determined by the Local Chapter, and that they be advised that it would be easy to get into legal entanglements if care is not taken.

The Secretary read a letter from the Municipal Chemists of the City of New York, relative to a gift of \$500.00 "to carry on the work of the Institute." It was discussed by Dr. Grosvenor and Dr. Breithut.

It was moved and seconded that the Secretary write a letter to the Municipal Chemists, expressing the Institute's appreciation of their generous gift, but that the Institute feels that it cannot properly accept this donation and, therefore, returns this gift to the Association of Municipal Chemists with thanks. Unanimously carried.

The Secretary read a report from Miss Wall saying that she could con-

tinue as Editor of *The* CHEMIST and making many valuable suggestions regarding *The* CHEMIST and the Year-Book.

It was moved and seconded that Miss Wall's suggestions relative to *The* CHEMIST and the Year-Book be approved.

The Secretary was instructed to write Miss Wall expressing the pleasure of the Councilors that she could reconsider her resignation. In response to her request for assistance from the Council, a Public Relations Committee, consisting of Dr. F. W. Zons, Mr. F. J. Kenney, and Mr. L. V. Quigley, has been asked to co-operate with her on *The* CHEMIST, and to formulating the means whereby the readers of *The* CHEMIST may properly appreciate the policies of the Institute.

The Secretary read a letter from the firm of Bigham, Englar, Jones, and Houston, relative to spontaneous combustion of oil saturated waste.

The Secretary was requested to write this firm, informing them that the broadcasting of this cry for help had been reported from a great number of Institute members, and that as a word to the wise, if they want to get technical advice, to save time and money by applying for it in a business-like manner.

The Secretary reported that a position offered by the American-British Chemical Supply Company, had been filled on recommendation of the Institute.

The Secretary read the membership report, giving the present membership as 606.

On the report of the Qualifications Committee five Fellows, three Associates, and three Juniors were elected to membership; names on page 55.

It was moved and seconded that the names of the members in arrears be referred to the secretaries of their chapters.

Dr. Breithut read a letter from the Board of Public Education, Junior Employment Service, Philadelphia, Pa., which was discussed by Mr. Cayo, Dr. Moody, Dr. Knight, and Dr. Breithut, and was referred to Dr. Moody for the Educational Committee.

Mr. Simon's resignation as a member of the Qualifications Committee was accepted with regret.

It was moved and seconded that the Treasurer draw a check for \$500.00 payable to the Association of Municipal Chemists.

October 31, 1930

HOWARD S. NEIMAN,
Secretary

**HOW DOES YOUR ACCOUNT STAND ON THE TREASURER'S
BOOKS? HAVE YOU PAID YOUR DUES?**

NEWS OF THE CHAPTERS

New York

For the season of 1930-1931, the New York Chapter, at its council meeting in September, planned a program of addresses by speakers of distinction, with the hope of acquainting the public with a better understanding of the value of the chemist.

This program was officially initiated at the November meeting when Mr. R. R. Williams of the Bell Telephone Company talked on the work of the chemist in the telephone industry.

At our next meeting, December 12th, the speaker will be The Honorable Shirley W. Wynne, M.D., D.P.H., who will discuss the importance of the chemist in public health work. A detailed announcement of this meeting appears elsewhere in this issue.

Subsequent meetings will be held at The Chemists' Club, 52 East 41st Street, on January 16th, February 6th, March 6th, April 3rd, and May 1st, 1931. The speaker at each of these meetings will be some man who is outstanding in his respective field.

A Committee on Public Relations has been established for the Chapter, so that news information about our meetings and speakers released to newspapers and technical magazines will be authoritative and technically correct.

FREDERICK J. KENNEY,
Chairman

The November dinner meeting of the American Institute of Chemists, New York Chapter, was held at the Murray Hill Hotel on the evening of November 14th. Mr. Frederick Kenney, Chief Chemist of the Department of Purchase of the City of New York, Chairman of the Chapter, presided.

The speaker of the evening was Mr. R. R. Williams, Chemical Director of the Bell Telephone Laboratories, who talked on *The Contribution of Chemistry to Telephony*.

Mr. Williams' department comprises about one hundred and sixty technical workers of whom approximately one hundred and twenty are chemical graduates. In discussing the work of the chemist in the electrical field, Mr. Williams emphasized not only the problems involved, but also the nature of the service rendered by professional chemists. A detailed presentation will be found elsewhere in this issue.

The paper was nicely adapted to the interests of the audience and the discussion and question period occupied approximately one hour. Among those who discussed the paper were: Dr. M. L. Crossley, Chief Chemist, Calco Chemical Company; Dr. Joseph F. X. Harold, Consulting Chemist; and Leon V. Quigley, Technical Editor, Bakelite Corporation.

Respectfully submitted,

LEON V. QUIGLEY,
Secretary

Pennsylvania

On November 4, 1930, the regular monthly meeting of the Pennsylvania Chapter was held at the Engineers' Club with Mr. F. D. Jones presiding.

The minutes of the previous meeting were read and approved.

Mr. Cayo gave his report on the proceedings of the National Council. In reply to a motion made at the last meeting concerning the appointment of committees to aid member inventors, he reported that the National Council was already functioning as such a general clearing house for such aid. Mr. Leavitt who had offered the motion acknowledged his pleasure at this statement and thought that more publicity about it would be a distinct aid in getting new members.

The chairman announced the transfer of Mr. Jenne from the Trips Committee to the Committee on New Members, and of Mr. Thews to take his place.

Mr. Cayo reported the necessity of more editorial material for *The CHEMIST*.

Mr. J. D. Stevens, employment expert of the *Business Service Company*, was introduced as the speaker of the evening. He talked on *Both Sides of the Employment Question*, and then led a discussion on several points that he had raised. The meeting was well attended and the speaker aroused considerable interest. See page 31.

Respectfully submitted,

BENJAMIN LEAVITT, *Secretary*

Washington

The first meeting of the Chapter since last May was held on the evening of November 12th with eighteen members in attendance.

Chairman Lynch, who with Dr. Knight attended the October meeting of the Council, gave an account of the business transacted at that meeting and was especially pleased to report that the Council had approved the program of the Washington Chapter regarding the improvement in the Classification Schedules under which Federal chemists work. Most of the remainder of the meeting was taken up with a discussion of some of the considerable difficulties surrounding the adoption of this program by the various departments, and a committee was appointed to study the means through which the scheme might be put into effect.

Dr. Charles E. Munroe has recently donated to the Chapter a large number of interesting and valuable letters which he has received in the course of his long career from eminent chemists throughout the world. Dr. Couch, chairman of the Committee on *Memorabilia*, is negotiating with the Smithsonian Institute with a view to turning over to them for preservation the items of historic chemical interest which the Chapter is gradually accumulating.

Respectfully submitted,

O. E. MAY,

Secretary

THE NEW MEMBERS

Fellows

DAYTON C. BOLIN, Texas Pacific Coal and Oil Co., Fort Worth, Texas.

ROY BENTON DAVIS, Professor of Chemistry, University of the South, Sewanee, Tenn.

EMILE CHARROPIN FREELAND, Industrial Engineer, W. R. Grace & Co., 7 Hanover Square, New York, N. Y.

MARTIN KILPATRICK, JR., Assistant Professor of Chemistry, John Harrison Laboratory of Chemistry, University of Pennsylvania, Philadelphia, Pa.

MISS ANIS R. PETERSON, Chemist, Commission on Standardization of Biological Stains, Color Laboratory, Bureau of Chemistry and Soils, Department of Agriculture, Washington, D. C.

Associates

LYLE KERMIT HERNDON, Sanitary Chemist and Chemical Engineer, State Water Commission of West Virginia, 315 First Unit Capitol Building, Charleston, West Virginia.

KIRBY ERROLL JACKSON, Assistant Professor, College of the Pacific, Stockton, California.

ANDREW J. PENZA, Chemist, Department of Health, Chemical Laboratory, Foot of East 16th Street, New York, N. Y.

Juniors

BENJAMIN HENRY T. DOLIN, Chemist, Beth Israel Hospital, Stuyvesant Park East, New York, N. Y.

JOHN DAVID REID, Junior Chemist, Color Laboratory, Bureau of Chemistry and Soils, Department of Agriculture, Washington, D. C.

FRANK WALTER REINHART, Instructor, Juniata College, Huntingdon, Pa.

APPLICATIONS FOR MEMBERSHIP

Applications have been received from the following:

For Fellowship

SIEGFRIED FLORSHEIM, Sales Promoter, American-British Chemical Supplies Co., Inc., 180 Madison Avenue, New York, N. Y.

AVENIR PROSKOURIAKOFF, Associate in Physiological Chemistry and Toxicology, Jefferson Medical College, Lansdowne, Pa.

HOWARD STOERTZ, Assistant Professor of Chemistry, Philadelphia College of Osteopathy, 48th and Spruce Streets, Philadelphia, Pa.

For Junior Membership

HENRY F. DODENHOFF, Tutor

CASIMIRO LIOTTA, Fellow

ERNEST LIVINGSTON, Fellow

ROBERT MAURMEYER, Tutor

DAVID SHAREPKIN, Laboratory Assistant

JACOB G. SHAREPKIN, Tutor

ROLAND M. WHITTAKER, Tutor

All these applicants are at the Brooklyn Branch of the College of the City of New York, 80 Willoughby St., Brooklyn.

These applications will be presented for action at the next meeting of the National Council.

PERSONALS

PRESIDENT BREITHUT has been elected, *ex-officio*, an honorary member of the *Chemical, Metallurgical, and Mining Societies of South Africa*.

MARSTON T. BOGERT has been elected an honorary member of the *Société de Chimie Industrielle*.

DAYTON C. BOLIN, formerly Fabrication Superintendent for S. Davison & Co., British Guiana, South America, has accepted a position as a chemical engineer for the Texas Pacific Coal and Oil Co., Fort Worth, Texas.

FRANKLIN H. STEELE, formerly Assistant Manager of the General Chemical Co., Long Island City, N. Y., is now a Chemical Engineer with the Pennsylvania Salt Manufacturing Company of Philadelphia.

NAO UYEI, formerly Research Chemist in the National Jewish Hospital, Denver, Colorado, and

Professor at the University of Denver, has accepted a research position at the Sterling Chemistry Laboratory, Yale University.

Among our more articulate members, the following have recently delivered addresses of note:

B. T. BROOKS, before the Polytechnic Chemical Society of the Brooklyn Polytechnic Institute, on *The Modernization of the Petroleum Industry*.

JEROME ALEXANDER, before chemistry students at the College of the City of New York, on *Colloid Chemistry*.

CHARLES H. HERTY, before the Atlanta Chamber of Commerce, on his own new method of making white newsprint pulp from slash pine.

ALLEN ROGERS, before the Virginia Section of the A. C. S., on *Chemistry in the Leather and Fur Industries*.

ADDRESSES WANTED FOR

MISS ISABELLE DAVISON COLLINS, formerly 342 Cherry Street, N. Y.

JOHN H. KUESEL, formerly 42 Broadway, New York, N. Y.

FLORIAN R. KAPP, formerly 448 E. 58th St., New York, N. Y.

ANDRES SOLOMANOFF, formerly 76 West End Ave., Brooklyn, New York.

WALTER R. CLARK, formerly Grasselli Chemical Co., Grasselli, N. J.

MARCEL E. SCHERER, formerly Room 2015, 15 Park Row, New York, N. Y.

CHANGES OF ADDRESS

are being held over for the publication of the new roster in the December issue. Closing date for changes, December 10th.

EDITORIAL

Opportunity

The urgent problem of unemployment in the United States, for several months has engaged the best minds of finance, industry, labor, and government. Public agencies have been created and committees formed to find employment when possible and to offer free basic help to those who temporarily cannot earn the necessities of life.

Among our many aims we are established to improve the economic status of the chemist. The great majority of chemists are employees who have been affected by the present industrial crisis as drastically as has the rest of labor. Our broad aim of economic improvement is an objective which may engage us for many years. But now, in this present crisis, every effort should be organized to find work for the many chemists, who are faced, as never before, with the immediate necessity of having their present status improved from that of imminent poverty.

The problem of unemployment which faces professional men, like the problem facing all "white-collar" men, is unlike that which confronts organized labor. For one thing, organized labor has a voice and is represented; it shouts its trouble abroad, and sits in conference when finance, industry of government seeks a remedy. There is probably no organization in America so fit as the American In-

stitute of Chemists to voice the economic problem of the chemist and to represent him on those boards which aim to alleviate the unemployment burden of the country.

We are faced with a grave responsibility. We may side-step it as professional men often do side-step non-professional engagements; or we may welcome it. We may side-step it and remain just another technical society; or we may welcome it as an opportunity to accept our just share in a national movement, an opportunity to aid and speak for our whole profession and become once for all that organization which the profession and the public regards as the chemist's representative in public affairs.

Polish Up Your Viewpoint

As has been consistently emphasized, in these pages and elsewhere, The American Institute of Chemists is endeavoring to advance the *profession of chemistry*.

The Institute is now completing its eighth year and is proceeding in a conservative dignified manner toward its objective. That its advancement has not been more rapid is due to the lack of appreciation on the part of chemists generally to realize the necessity for an organization interested solely in the *professional* side of chemistry.

It does not conflict with the purposes and objects of any other

organization of chemists in this country, nor does its activity interfere with any of their activities. And the urgent need for such an organization, to foster the purpose of establishing the profession of chemistry in its proper place with the other professions will be self-evident to any chemist if he will only give the subject serious consideration.

What would happen to any of the large industrial organizations that depend on chemical processes for their existence if they relied entirely on their highly scientifically trained research departments, and neglected the financial and commercial sides of their business? The answer is simple—failure.

Success in such enterprises requires a careful balance of science, finance, and business sense. Why should not the individual apply the same general type of organization to his own efforts? No chemist who applies himself solely to the development of his scientific work and neglects the non-scientific side can obtain the full benefits to which he is entitled.

It is a sad commentary on chemists to realize that with the enormous development of chemical industry during the past decade it has been necessary in so many cases to go outside the ranks of the chemists to find men capable of taking executive control. But, in all fairness, it must be said that this has not been entirely the fault of the chemist.

The extensive application of *chemistry* to industry was recognized as early as 1861, when it was said that "Chemistry is an important aid to the study of mineralogy, pharmacy, electricity, cooking, metallurgy; and in various manufacturing industries, especially glass, leather, soap, paint, glue, starch, etc. In fact, it would be an easy task to continue almost indefinitely the list of arts whose processes if they admit of explanation at all, must be explained upon the principles of chemical philosophy."¹

But it was not until the beginning of the late war that the true value of the *chemist* was appreciated by American industry.

Until about 1915 practically all the chemists in this country were employed in educational institutions or government control laboratories. The basic requirements stressed scientific thought and training, and gave little or no thought for economic relationships.

With the advent of the chemist in industry, however, a more balanced training became necessary, but what do we find? In general, no prescribed course for training for the profession of chemistry in the different institutions of learning in this country.

The Institute fully appreciates that the profession of chemistry will not be properly recognized until the curricula of professional schools include a definite course of training

¹ Quoted from an unsigned essay on, *The Classification and Mutual Relationship, and Various Uses of the Physical Sciences*, in the *Analectic Magazine* Vol. VI. Page 145, 1861.

which will give students just what the profession demands as minimum prerequisites for qualified service and practice.

The active participation of chemistry in modern industry, places the science in a commercial environment, which immediately involves the subject of ethical conduct, and contract conditions—issues of vital importance to the chemist and the practice of his profession.

The Institute is fully awake to the responsibilities which devolve upon the profession, and its active

committees are studying all the various considerations which affect it. All are striving together for the betterment of the chemist, but until the chemist as an *individual* makes himself realize his own need, the work of the Institute cannot proceed so quickly as its far-sighted leaders would desire.

Polish up your viewpoint on chemists and chemistry, and help the American Institute of Chemists to further the general movement for the economic betterment of a most valuable public servant.

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